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The Heart of the Anti-Vivisectionist

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THE HEART OF THE ANTI-VIVISECTIONIST.

"Of a sudden a casement wildly opened just above my head, and a woman gave three frightful screeches and then cried, 'Oh, death, death, death.' "

It was the plague of London, and cries and lamentations were universal. Infected houses had large red crosses painted on their doors, with the woeful prayer "Lord have mercy upon us!" These houses were padlocked on the outside and were guarded by watchmen so that none might leave or enter. So great was the devastation that men feared the living would be unable to bury the dead. In a measure this became true, for coffins and formal funerals were abandoned, and the corpses were gathered into dead-carts and dumped into pits. In Aldgate a pit was dug so large that the church wardens were accused of preparing to bury the whole parish. But in two weeks this pit was full, and others were commenced.

Many people fled to the country, but armed guards stopped them at the surrounding towns. Often they died by the wayside, and villagers dug graves to the windward of the bodies, and pushed them in with poles.

These things are recounted by Defoe in his "History of the Plague in London." It is a story of human anguish and helplessness. The people knew nothing of the cause of the plague, and while some attributed it to a comet, others thought it was due to "smells and scents" from infected dwellings or to musty and unwholesome casks in tippling houses.

In their helplessness people sought to ward off infection by washing their hair with vinegar, by making smoke with brimstone and gunpowder, by holding garlic and rue in the mouth, and by taking "sovereign cordials," "anti-pestilential pills," and "plague water."

Today we know that plague is caused by germs conveyed to man by fleas that formerly lived on infected

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rats. Plague still exists, even in America, but its spread is prevented through the extermination of rats and fleas.

The Ethics of Taking Animal Life.

The extermination of these pests seems reasonable and justifiable to the average mind; nevertheless there are persons who object to the measure on moral grounds. Poisoning rats and catching them in traps might cause suffering; wherefore one should refrain. The same line of argument of course applies to all other lower animals. "I would not have one mouse painfully vivisected to save the greatest of human beings, or the life dearest to me." This is an extraordinary statement, but it was made by a witness before the British Royal Commission on Vivisection, and it exemplifies the anti-vivisectionist's point of view.

A little analysis resolves this line of thought into the utmost absurdity: A man has a tapeworm. If he nurtures the tapeworm, it will have a billion eggs capable of becoming tapeworms, each having a billion eggs, and so on. The supply of human beings for those tapeworms would not be adequate.

It is therefore clear that lower forms of animal life must be destroyed in order that human life may be possible and tolerable. We must destroy pests that spread disease. We must destroy flesh-eating animals, lest they destroy us. We must kill plant-eating animals for food; and if not for food, for our own welfare, for otherwise they would consume the only form of food that would remain to us. Man is enjoined to do these things in the Bible, which in its first chapter bids him subdue the earth and have dominion over every living thing.

The Protest of the Anti-Vivisectionists.

Despite these facts there are a few persons, "anti-vivisectionists," who would accord man only limited dominion over the animals. When forced to admit that



he may kill animals for food, they deny that he may use them to promote health. He may kill animals to prevent death from starvation, but not to prevent death from plague or diphtheria. This is a strange argument, which would force us into our graves willy-nilly.

Anti-vivisectionists oppose particularly the use of animals for scientific research, which reveals the cause of disease and often furnishes the cure. It might be permissible to exterminate rats and fleas now that we know they spread plague, but to discover this fact by research on rats is reprehensible. Such animal research they call vivisection, and an anti-vivisection journal says of it: "Vivisection is utterly detestable. It is immoral and demoralizing. Anti-vivisectionists should keep up an unceasing agitation and work unitedly in asking legislatures for laws of an entirely prohibitory character."

How Plague Is Prevented.

It would be well to look into this question of animal research a little and ask what it has done for us. Why are there no plagues nowadays in London, or in New York? Why is there no watchman at your door, and why do you not hear the bellman with the dead-cart?

There is still plague in most countries of the world, and during the past few years slight outbreaks have occurred in Oporto, Rio de Janeiro, Glasgow, Liverpool, San Francisco and Seattle. However, the cause of the disease is known, and the plague-carrying rat can be exterminated, or at least kept under control. Furthermore, people sick with the disease may be treated with a serum, and those exposed to it protected with vaccine. Thus any outbreak of the disease is quickly checked.

The doctors who have wrought this miracle of science are Yersin, Kitasato, Simond, Haffkine, Bannermann, Kolle, Calmette and Borrel. Few of us have ever heard their names, but many of us may owe our lives to their achievements.



The work of the rat is still seen in India. In that country the lower animals are held sacred and are protected. In consequence a million Hindus die annually of plague, which the rats perpetuate. Here we have a simple experiment in "anti-vivisection;" it is infinitely more cruel than any experiment in animal research.

The Control of Smallpox.

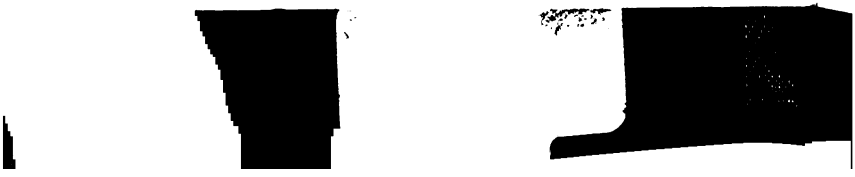
The story of plague finds its parallel in the story of smallpox. The prevalence of this disease in earlier times is shown by a German adage: "From love and smallpox, but few remain free." In the eighteenth century only ten per cent of the world's population escaped smallpox; so love's majority could not have been large.

After an epidemic in the English town of Chester in 1744, only seven per cent of the population of 14,000 had never had smallpox. Eight years later there was an epidemic in Boston, Massachusetts. Eighteen hundred people in the population of 15,000 fled the city. Of those remaining, only 174 had not had smallpox when the epidemic subsided.

In some epidemics a third of the population perished, and thus the tragedy of the London plague was exceeded. But death was not the only calamity from smallpox, for many of the victims lost their sight. In those days smallpox was the commonest cause of blindness, and the records of the London Asylum for the Indigent Blind show that two-thirds of the inmates had lost their sight from this disease.

Such was the condition of things before 1798, when Dr. Jenner introduced vaccination. But so prompt and spectacular was the decrease in the disease with the introduction of vaccination that Thomas Jefferson predicted that future generations would know smallpox only through history. This prediction has not been fulfilled, for vaccination has not been universally enforced.

Where it has been enforced, the disease has been all





but eradicated. Some countries with compulsory vaccination have had no deaths from smallpox in an entire year. In Germany the death rate from smallpox is one person a year for every million inhabitants, and this one is often an unvaccinated Russian. In the army the record has been even better, owing to re-vaccination of recruits, and the official figures show only two deaths from smallpox in a period of forty years.

Such figures gain emphasis when contrasted with statistics for Russia. In that country, without compulsory vaccination, there are often a quarter of a million deaths from smallpox annually.

These figures prove the efficacy of vaccination. Still further proof is furnished by the daily incidents of hospital life, such as the immunity to smallpox of vaccinated nurses who work in fever hospitals, and the immunity of vaccinated babes who nurse from the breasts of mothers sick with the disease. Such demonstrations afford conclusive proof of the immunity conferred by vaccination.

Nevertheless, there are a few dissenters who decry vaccination. Their dissent was vehement a century ago, when they affirmed that children vaccinated with cowpox would grow hoofs, horns and tails. These views have proved false, but opposition to vaccination still survives on grounds of sentiment and "conscientious objection."

Much objection is offered to the use of calves for obtaining vaccine, and here we meet again the "moral issue." We will examine this issue from several viewpoints after a further brief consideration of the benefits of animal research.

Surgery Revolutionized.

First, a few words concerning the benefits that animal research has conferred upon surgery. It is conservative to say that research has entirely revolutionized



this science. Before 1846 there were no anesthetics, and a surgeon could give only whisky or opium to relieve pain on the operating table. Chloroform had, it is true, been discovered as a chemical compound in 1831 by Soubeiran, and ether in 1840 by Valerius Cordius, but these agents were not used for surgical anesthesia till some years later.

Yet surgery was still dangerous, for there was no such a thing as asepsis. In consequence, wounds oozed with pus and squirmed with maggots. Often ligatures rotted loose from arteries, and patients bled to death. In other cases wounds were affected with gangrene, and in some hospital-epidemics only one patient in four escaped this condition. Even trivial wounds were dangerous in pre-antiseptic days, and a mere scratch often resulted in "blood poisoning," erysipelas, gangrene, or lockjaw. For these reasons surgery was employed only as an extreme measure, and it was still a desperate procedure.

In the late '60s Pasteur and Lister demonstrated the presence of putrefactive organisms in the air, and Lister introduced the antiseptic treatment of wounds. Antiseptic surgery was pretty generally adopted by 1880, and it has since saved millions of lives. Before the days of antisepsis two surgical patients out of every three succumbed; nowadays only two or three die in every hundred. Hospital gangrene is no longer known; it was banished as if by magic. The experience of the Münich General Hospital is noteworthy, for an epidemic of gangrene existed when antisepsis was introduced, and 80 per cent of the wounds in the hospital were affected. Antisepsis was introduced in 1875, and no case of gangrene has since occurred.

Benefits to Motherhood.

What research has done for surgery it has also done for motherhood. Formerly one married woman in every thirty was doomed to die of childbed fever, and in severe





hospital-epidemics half the mothers perished. Today, through the adoption of antiseptic methods, childbed fever has been almost abolished. Much of this progress is due to Pasteur, who showed in 1878 that the disease was due to bacteria. Semmelweis had emphasized the factor of contagion as early as 1846, before bacteria were known; but no real progress was made till germs were discovered and the process of infection explained.

Benefits to the New-Born Child.

The benefits of antisepsis are not restricted to the mother; they apply also to the babe. It is rare indeed in the present day that an infant dies of "nine day fits," a disease the reader has probably never heard of. So rare is the disease in modern times that Dr. J. Whitridge Williams, the well-known obstetrician, has not encountered a case in ten thousand confinements. Yet "nine day fits," or tetanus, formerly occurred in hospitals in terrible epidemics. It is recorded that in one such epidemic, two-thirds of the new-born infants died.

It is evident that we must look back into history to appreciate the benefits of animal research. And we should remember that these benefits come from actual scientific experiment, and not from theory or academic discussion. For centuries physicians contended with the dangers of childbirth, but no advance was made till the aid of scientific experiment was enlisted.

Checking Tuberculosis.

The benefits of animal research have become so commonplace that we are prone to lose sight of them. Few of us realize that every "Don't Spit" sign is an endorsement of animal research. Koch discovered the bacillus of tuberculosis in sputum in 1882. Eight years later Cornet showed that the germ was still potent in dried sputum and was capable of causing the disease. The "Don't Spit" campaign was the logical consequence, and it has cut the death rate from consumption in half.



Tuberculosis has also been checked by other measures. Nowadays we have the tuberculin test, a simple and painless experiment that consists in rubbing a little filtrate into the skin. If tuberculosis is present, a reddened area results. The test can be applied to cows as well as to human beings, and when a cow is found to be tuberculous, its milk is no longer used for human "consumption."

Eliminating Yellow Fever.

A few words about yellow fever—a disease that is now almost extinct. On the old Panama railroad—which the French built in the early '80s in their attempt to dig the canal—there is a little town by the name of Matachin. This Spanish word means "dead Chinaman," and the name was applied to the town because a thousand Chinamen and a thousand African negroes died there of yellow fever in the space of six months. It is estimated that the railroad cost a human life for every tie that was laid. In spite of this sacrifice the canal, as we know, was not completed, and the French abandoned the task after losing 22,000 laborers. They were defeated by yellow fever.

Years later the cause of yellow fever was investigated by an American commission appointed in 1899 to work under Dr. Walter Reed in Havana. It was thought the disease was contagious, but this theory was disproved when Dr. R. P. Cook and several soldiers slept for twenty consecutive nights in the deathbeds of yellow fever victims.

The mosquito was then investigated as a disease-carrier, and a dozen volunteers permitted themselves to be bitten. Two of them, Dr. James Carroll and Dr. J. W. Lazear, developed yellow fever, and Dr. Lazear died of it. The work of this commission showed that yellow fever was conveyed by a certain species of mosquito, and the task of eradicating the disease became simple. The





breeding places of the mosquito were attacked, and the windows of hospitals and houses were screened. In seven months Havana was freed of yellow fever, after a record of its continuous presence for 140 years.

The same measures were applied to the Panama Canal Zone, and yellow fever was eradicated within a year. The Americans then resumed the task the French had abandoned, and they shortly brought the canal to completion. The finished canal is a tribute to scientific research.

Typhoid Fever, Brain Fever, Diphtheria, Hydrophobia and Other Diseases.

The conquest of disease is an absorbing topic, and the story of yellow fever could be duplicated with many other diseases that afflict mankind. However, the details of each individual achievement might become wearisome, and the record of scientific triumphs might deteriorate into a catalogue. Suffice it to say that medical science, largely through animal research, has curtailed the terrors of cholera, dysentery, typhoid fever, meningitis, hydrophobia, malaria, caisson disease, hookworm disease, pellagra, beri-beri, etc, etc.

In the Spanish-American war nearly a fifth of the American army had typhoid fever. In other words, there were 20,000 cases in an army of 108,000 men. In the World War there were only 1,000 cases in the American army of 4,000,000 men. The difference was due to preventive inoculation and sanitation.

Formerly brain fever, or meningitis, killed 75 per cent of its victims. Many of the remaining 25 per cent were rendered deaf, blind, paralytic, epileptic, or idiotic. This has been greatly changed by Flexner's serum, for nowadays 75 per cent of the patients recover and few of them are crippled.

Diphtheria antitoxin has also wrought its miracle and has saved hundreds of thousands of lives. The



diphtheria death rate in the Boston City Hospital was reduced by antitoxin from 50 per cent to less than 10 per cent. Antitoxin affords an absolute cure when given early, and this hospital has treated 500 cases of diphtheria among doctors, nurses, and ward attendants without a single death. In the last twenty-five years antitoxin has saved more than 14,000 lives in the Boston City Hospital alone.

Hydrophobia has also been successfully combated, and England managed to rid itself of the disease for eighteen years. With the disease once eradicated, it was an easy matter to prevent its recurrence by requiring all dogs coming to the country to undergo a period of quarantine or observation. This quarantine was recently evaded by aviators who brought pet dogs with them from the continent and thus re-introduced the disease. The Pasteur treatment for hydrophobia has saved thousands of lives and has brought immeasurable comfort to victims of dog-bite, who would otherwise live for months in dread of the disease. This peace of mind is no trivial consideration when we regard the fact that 100,000 persons a year take the Pasteur treatment.

Often the remedy for a disease is amazingly simple, though the task of tracing its cause may be laborious and intricate. Experiments on chickens showed that beri-beri is caused by eating too much polished rice. The remedy consists in including a portion of whole rice in the diet. Hookworm disease was traced to a parasite found in damp ground. It is contracted by walking barefoot, and is prevented by wearing shoes.

The Lengthening Span of Life.

These many advancements of medical science have kept men free from pain and disabling disease, and have added greatly to the span of human life. It is estimated that the average length of human life in the sixteenth century was eighteen or twenty years. When vaccina-





tion against smallpox was introduced at the end of th eighteenth century, the average life was thirty-eigh years. It has now increased to forty-five or fifty years These figures give one a perspective of the achievement of preventive and therapeutic medicine.

Diseases of Old Age.

The reproach is sometimes offered to medical sc ence that there has been an increase in cancer, organi heart disease, and diseases of the arteries and kidneys Possibly this is true, but it is more probable that th increase has been in the frequency of the diagnosis an not in the occurrence of the diseases. The greater fre quency of the diagnosis would be due to the greater ac curacy of modern methods. But even an actual increas in these diseases would redound to the credit of medica science, for such diseases are the concomitants of old age and might reasonably be expected to increase as mor and more people reach the later years of life.

Discovery of New Medicines.

Animal research has still other things to its credit for it has been helpful to scientists in the discovery o new drugs and the determination of their doses. Som of these drugs, such as chenopodium, are practically un known to the average layman; nevertheless they sav countless human lives. Chenopodium is used in th treatment of hookworm disease, a malady which afflict a hundred million people. This drug, together wit preventive measures, may in time completely eradicat the disease.

Animal tests of many drugs are required by law when the potency and purity of the preparations canno be determined by chemical methods. Furthermore, ani mal tests are necessary for the enforcement of pure foo laws. In Washington, D. C., over 90 per cent of th animal experiments are conducted for the purposes o law enforcement, and their ultimate object is of cours



to protect the public. A simple illustration is apt at this point. A few years ago it was not known that wood alcohol differed in its action on the body from grain alcohol; in consequence wood alcohol was used freely in medicines. Today everybody knows that wood alcohol causes blindness and death. This fact, however, was learned through animal research, and the only alternative would have been research on human beings.

When human research does become necessary in experimental medicine, the tests are usually made on healthy scientists rather than on volunteer patients. Thus salvarsan, or "606" was first tested on two laboratory assistants who offered their bodies for experiment.

Benefits to Animals.

Animal research is in a manner co-operative, for the animals themselves derive much of the benefit from scientific investigation. A great many animal diseases have been eradicated or checked, as for instance hydrophobia, tuberculosis, splenic fever, pleuro-pneumonia, glanders, hog cholera, chicken cholera, swine erysipelas, Texas fever, foot and mouth disease, lockjaw, lumpy jaw, rinderpest, sheep scab, infectious abortion, and various parasitic diseases. Many of these diseases have been introduced from foreign countries by imported animals, and this catastrophe could have been averted if animal research had been further advanced at the time. Even so, such diseases as Mediterranean fever and surra have been barred at our ports by tests performed on animals in quarantine.

The full significance of all this may not be evident to the average city man, but he will appreciate the statistical fact that diseases in domestic animals would cost the country a billion dollars a year if it were not for animal research. Moreover, if there were an unusual spread of animal disease at any time, the country might find itself in famine.



The prevention of animal disease is therefore of the highest importance in our national life. This problem has received much attention from the Rockefeller Institute, which has established a Department of Animal Pathology near Princeton, N. J. The department comprises a farm of four or five hundred acres, with laboratories and equipment for scientific experiment. This work not only protects the farmer from loss among his herds, but also protects the animals themselves. In this connection it has aptly been said, that if animals had the power of voice they might well ask to be saved from the anti-vivisectionists, who represent themselves as their friends.

In a sense animals have repaid man for scientific work done in their behalf. In 1891 some experiments showed that the germs of Texas fever were conveyed to cattle by the bite of a tick. It had not previously been known that an insect bite could be the means of inoculation with disease germs. This principle was investigated further, and a few years later it was discovered that plague could be conveyed to man by the flea.

Anti-Vivisection Fury.

Such then is the wealth of achievement due to animal research. In this research very little pain has been imposed upon experimental animals. In isolated instances animals may have been subjected to some discomfort, but it is rare indeed in this age of ether and chloroform that an animal is required to suffer pain. Modern animal research is in fact no more painful than modern education. In view, then, of the humane character of animal research, and in view of the incalculable benefits that it confers upon mankind, it is easy to understand that there has never been any popular and spontaneous opposition to this branch of medical science. Probably there has been less opposition to it than to the theory that the world is round. Nevertheless there is

opposition—bitter opposition—on the part of a minority, which would be insignificant were it not for the fact that its proponents are forever waging scurrilous and unscrupulous propaganda for the abolition of animal research. This small minority of "anti-vivisectionists" contends that a guinea pig's life is as valuable as a man's, and that the guinea pig should not be sacrificed for the man's benefit. This opinion should be accorded respect so long as the anti-vivisectionists speak for themselves. But unfortunately these propagandists insist that all men shall adopt their curious code of morals; for, in the words of Kipling, they "consider their own undisciplined emotions more important than mankind's most bitter agonies."

Anti-vivisectionists are wont to insist that men and animals are equal, or that they live together in a community life in which man is perhaps a little inferior. The Colorado Bureau of Child and Animal Protection, in its recent anti-vivisection defections, issues a circular which says: "Don't make the mistake of thinking there is a great deal of difference between us and what we call the lower animals, or 'dumb' animals, because they cannot talk in the same way we do. There is no great difference. That is true of all kinds of animals, of birds and reptiles and even insects. * * *"

"The Open Door," an anti-vivisection journal, says that "Men, and especially children in their formative years, must be taught to recognize and respect the beauty and sanctity of life in sub-human as well as human form." In other issues of this journal the dog is portrayed as super-human. The journal publishes a poem about "The Little Dog Angel:"

"High up in the courts of Heaven today
A little dog angel waits,
With the other angels he will not play,
But he sits alone at the gates;" etc., etc.



The dog is deified in a poem entitled "Christ in the Torture Trough:"

"Ye have laid Christ in the torture trough,
Ye have bound him up and thigh," etc., etc.

It is clear that the psychology of the anti-vivsectionists is no more advanced than that of the ancient Egyptians, who erected statues to cats and dogs on the the banks of the Nile.

The anti-vivisectionists balk at no obstacle to enforce their views. They dispose of the benefits of animal research by peremptorily denying them. They then seek to make research odious by denouncing it as "Pasteurian quackery," "an organized system of barbarity," "deliberate dabbling in blood and agony," "a devilish invention of unbalanced mentality," etc., etc. One anti-vivisection society goes so far as to state in its annual report: "Vivisection is a recognized form of mental perversion—a savage mania which is known to the keepers of every madhouse. It is of the same order as the spirit which incites murderers of a certain type to rip their human victims' bodies to pieces." This is not a kindly description of the science that has conquered plague, hospital gangrene, childbed fever, yellow fever, and innumerable other ills that formerly afflicted mankind. But the statement of anti-vivisectionists are seldom expressions of calm judgment; they are rather the missiles of a rancorous and implacable propaganda.

The lengths to which anti-vivisectionists go to discredit medical science are almost incredible. At an anti-vivisection exhibit in New York some years ago, they showed a gas-heated oven containing the stuffed body of a rabbit. The demonstrator told visitors that the oven was used by research scientists for baking animals alive.



As a matter of fact, the "oven" was an incinerator used for destroying laboratory refuse.

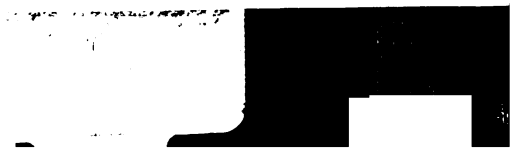
At another exhibit a contrivance was represented as an instrument used to break the jaws of dogs "without anesthetics." In reality the instrument was a mouth-gag, such as might be used on any child in a tonsil operation.

Upon another occasion the mutilated bodies of dogs were displayed and labeled as the product of a Philadelphia laboratory. The impression was given that the animals had been cut up alive and had died in consequence. As a matter of fact the carving was so wide and crude that it had obviously been done post-mortem—possibly by the anti-vivisectionists, for they owned the dogs, as well as the rest of the exhibit.

Anti-vivisectionists not only promulgate falsehood; they also subsidize it. A few years ago a Miss Britton was given a three-hundred dollar prize for a heart-rening essay describing a fictitious animal operation. Another writer has recently composed a poem about a dog that he saw "quartered and crucified" in a "Sawbones school." In the poem he says that he is a medical undergraduate, and that the dog had twice saved his life during the world war. The flaw in the story is that the young doctor turns out to be a man of 55 who is a professional writer and poet. His description of the operation on the dog is fraudulent.

Another common failing of the anti-vivisectionists is to misinterpret and misconstrue medical writings. Perhaps the misinterpretation results from ignorance, but the misconstruction is deliberate and wilful.

One anti-vivisectionist has attempted to make grist from the description of an experiment on a cat performed by Dr. Carrel. The original account states that the animal spent the day jumping on and off the furniture. "How intense the suffering must have been!" exclaims





the anti-vivisectionist. In reality the cat's jumping was merely a manifestation of playfulness.

A number of years ago Dr. Henry J. Berkley wrote an article on the treatment of insane patients with preparations of thyroid gland. The anti-vivisectionists seized upon the article and quoted this passage: "Two patients became frenzied and one of them died before the excitement had subsided." They omitted the rest of the sentence, "the immediate cause of the exitus being an acute disseminated tuberculosis." It is easily seen that misrepresentation becomes a fine art when one resorts to clipping commas. In this instance the anti-vivisectionists would make it appear that a patient dying of tuberculosis was killed by his physician.

The following is a much abused passage which the anti-vivisectionists have taken from the Medical Brief: "I sprayed the poisons of diphtheria, smallpox, scarlet-fever, or consumption into the throat, nose, or had them breathe them into the lungs, repeating the experiment in some cases every one or two weeks for months, with the result that no disease could be developed. Of course, I could not let the patients know what I was doing. I was supposed to be treating them for catarrh of the nose or throat."

One can imagine that this isolated passage would create a sense of horror in the reader, for it is a doctor's admission that he performed dangerous experiments on his patients. But shortly the writer of the article describes another experiment in which "human seed germs are converted in twenty-four hours into living ants." This passage discloses the article as a jesting hocus-pocus. Nothing could be more reprehensible than quoting it in serious vein, unless it be the resort of quoting part of it.

Another article that has been much misrepresented is Dr. Holt's "Report Upon One Thousand Tuberculin Tests in Young Children." These tests are used in the diag-

nosis of tuberculosis, and the procedure consists in dropping a little tuberculin into the eye or rubbing a drop of it on the skin. Much has been made of the fact that tests were applied to nine dying children—though the anti-vivisectionists well know that a dying child must be treated, and that no effective treatment can be given till a diagnosis is made. The tuberculin tests have been written up by the anti-vivisectionists as a thousand horrors, but in none of their writings have they emphasized the most important sentence in Dr. Holt's original article, "In no case was the test followed by any unpleasant results." Even the title of this article has been distorted, and one pamphlet misrepresents it under the caption: "One Thousand Tests of Deadly Tuberculin Made Upon Hundreds of Little Children, Some Being in a Dying Condition."

The anti-vivisectionists have also attempted to make capital from Dr. Noguchi's tests with luetin, which consists of a preparation of the dead germs of syphilis. The test is absolutely harmless, and consists merely in rubbing a drop of liquid into the skin. Nevertheless, Dr. Noguchi has been abused for this scientific work and has been reviled as a "Japanese vivisector," while his associates have been called "Christian and Jewish medical conspirators." The luetin test has received almost unbelievable misrepresentation; so gross has been this misrepresentation that a medically-ignorant witness testified before a United States Senate committee that Dr. Noguchi had inoculated healthy children with the virus of syphilis.

In 1896 Dr. A. H. Wentworth did some pioneer work on "lumbar puncture," which is a simple method of withdrawing fluid from the spinal canal. The test is harmless and is now an every-day procedure. Tests were made on twenty-seven children, fourteen of whom subsequently died from the different diseases for which they were in the hospital. This article of Dr. Wentworth's is still misconstrued after the lapse of a quarter of a cen-



tury, and a current pamphlet published by the New York Anti-Vivisection Society, entitled "Human Vivisection," states that all but two of the children died within a few days. The inference is left that the tests killed the children.

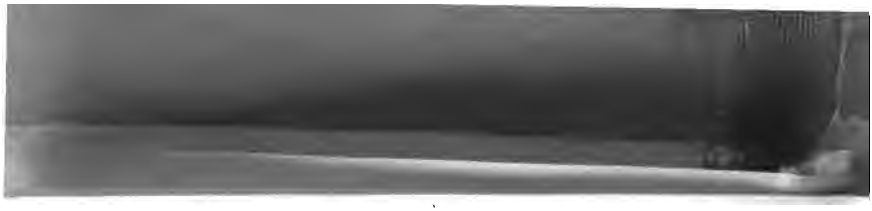
Another anti-vivisection pamphlet states that 70,000 British soldiers were vaccinated against typhoid fever and were afterward sent home from Gallipoli with tuberculosis. The reader is left to infer that typhoid vaccination causes tuberculosis.

An anti-vaccination folder displays a caption in large type: "What do you suppose?" The article continues: "What do you suppose made our soldiers in camp ripe for Death's sickle in the influenza epidemic of 1918?" The article then calls attention to the fact that the soldiers had been vaccinated, and without direct statement, leaves the impression that vaccination somehow causes death from influenza.

Thus may insinuation and innuendo be made to do the work of falsehood.

Another malicious expedient of the anti-vivisectionists is to omit essential details in giving second-hand descriptions of animal experiments. They have made much of a series of experiments on nerve trunks involving "agony beyond which science is unable to go." Yet the original article shows that the nerves were separated from the spinal cord, and that the animals were therefore insensible to pain.

They have described other experiments in which animals were bruised and crushed and burned, and apparently subjected to fearful torture. In some experiments dogs were shot through the bowels. All this sounds atrocious when one forgets to state that the experiments were done with anesthetics. This should be added, as well as the information that the experiments saved the lives of thousands of soldiers who were shot through the bowels—without anesthetics.



The audacity of the anti-vivisectionists in omitting mention of anesthetics is boundless; they have gone so far as to perpetrate this deception on the United States Senate when agitating freak legislation.

But even this impertinence has been outdone, for they have created horrors for propaganda by describing animal experiments and omitting the information that the animals were dead.

Such are the stories that fill the anti-vivisectionists' pamphlets, and such are the half-truths and whole falsehoods on which their propaganda is waged. Dr. Keen has pointed out that the average anti-vivisection statement is comparable to the assertion that "The Declaration of Independence was signed by Christopher Columbus on Washington's birthday during the siege of Vicksburg, in the presence of Queen Elizabeth and Judas Iscariot."

Unfortunately, truth is a plastic thing in the hands of an unscrupulous individual, and it is a simple matter for an anti-vivisectionist to write a misleading description of an animal experiment or an operation. If the embellishments and omissions are adroitly handled, one may, with technically accurate description, convey entirely false impressions. Omitting reference to an anesthetic is particularly effective. The following incident should be mentioned in this general connection:

I recently saw two operations simultaneously performed on a young soldier who was convalescent from tuberculosis and was about to be discharged from the army. The young man was placed in a sitting position on an adjustable framework of steel and leather. He was covered from chin to toes with a sort of shroud. A glinty-eyed, white-coated operator was using an unsterilized double-bladed cutting instrument, and with it was dissecting small pieces of cornified epithelium from the victim's head. Meanwhile a female assistant was clipping pieces of the delicate eponychium from his thumb,



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and was removing some of the heavy adjacent structures with a file. The young invalid had his eyes closed, but so far as I could learn he had not been given an anesthetic. In other words, the young man was having a haircut and a manicure.

This story is but one of the thousands that any antivivisectionist might tell. Such stories are written purely for propaganda and with the intent of prejudicing the fair-minded person into an acceptance of the anti-vivisectionist's impossible point of view.

Anti-Vivisection Propaganda Condemned.

A British Royal Commission, after five years' investigation of the subject of animal research, declared that the anti-vivisectionists' "harrowing descriptions and illustrations of operations inflicted on animals, which are freely circulated by post, advertisement or otherwise, are in many cases calculated to mislead the public."

Cardinal O'Connell says: "As between Pasteur and the promoters of this new cult, who can hesitate to stand with Pasteur?"

Cardinal Dougherty has expressed similar views: "According to the laws of nature, the lower species of creatures exist for the higher. The clod of earth supports the plant. The vegetable kingdom supplies the wants of the animal. The brute animal and all other inferior things are for the good of man, who was made directly for the glory of God. Man, then, may use all inferior things for his own benefit."

Animal research is endorsed by the Massachusetts State Federation of Women's Clubs in the following terms: "Whereas, it is impossible to estimate the number of persons alive today who owe their existence to the application of methods, preventive or remedial, made possible through scientific experimentation on animals:

"Therefore, be it resolved that the Massachusetts State Federation of Women's Club, assembled in Boston



on December 16, 1921, in gratitude to medical science, for past discoveries beneficial, both to humanity and to animals, go on record as favoring the continuance of medical research through animal experimentation."

The New York City Federation of Women's Clubs has similarly expressed itself by rejecting a resolution to exempt dogs from vivisection. (February 3, 1922).

On April 19, 1922, the St. Louis Board of Aldermen, in recognition of the benefits of animal research, passed an ordinance (by a vote of 22 to 4) requiring the city marshal to sell impounded dogs at seventy-five cents apiece to approved medical schools, when such dogs are needed "to teach and maintain the different courses of and for the study of medicine."

Animal Experiments Painless.

It is indeed obvious that anti-vivisection propaganda must be founded largely on misrepresentation, for the basic premise is that research animals are generally subjected to pain. While this may have been true before ether and chloroform were introduced, it is no longer true today. Hence it is only through misrepresentation that anti-vivisection propaganda can be maintained.

The reports of animal experiments returned to the British government show that only twenty-six experiments in 1,000 could possibly be attended by pain, practically the entire balance of the experiments being simple inoculations. Exceptionally an inoculation may cause an area of local inflammation; and much has been made of this by anti-vivisectionists, who would make it appear that all pin-prick experiments result in erysipelas and gangrene. Nevertheless, these government reports show that animal experimentation is essentially painless.

The painlessness of animal research was recently attested by Dr. Reid Hunt, who stated before a United States Senate committee that he had seen no painful animal experiments in twenty-five years' experience with

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the exception of some gas experiments on dogs. These experiments were performed during the war for the purpose of saving soldiers' lives. The dogs, of course, suffered no more pain than the 75,000 American soldiers who were gassed in Francé; nevertheless the anti-vivisectionists sought to frustrate the experiments, apparently deeming the dogs of greater value than the American army.

The Question of Sensibility to Pain.

The passion for protecting lower animals from pain is in part the outcome of a misconception that appraises animal-pain in terms of human suffering. This notion is fundamentally wrong, for it is certain that sensibility to pain decreases with the scale of intelligence. It is not an uncommon thing to see a mentally defective child deliberately and repeatedly bang its head against a wall, yet no one seeing the performance would say the child was hurting itself. If, then, the child of low mentality is so little capable of feeling pain, how much less sensible to pain must be the lower animals.

And this is one of the strongest arguments against subjecting animal research to any form of lay inspection or censorship—a measure the anti-vivisectionists are wont to advocate. A medically ignorant person might well mistake an automatism or a reflex for a manifestation of pain, and would proceed to appraise the "pain" in terms of human experience. Likewise on seeing a man in an epileptic fit, he would imagine the victim to be suffering the torments of a thousand hells, though the epileptic, being unconscious, would suffer less than the onlooker. Thus it is clear that the appraisal of pain is a matter for enlightened judgment, and that the measure of it is not the hysterical reaction that it provokes in the observer.

Animals Killed for Food, Sport, and Adornment.

Whatever may be man's conception of sensibility to



pain in the lower animals, he does not scruple to use these animals for his own purposes. The yearly slaughter of food animals in the United States is fifty million beeves, sheep and hogs, and two hundred and fifty million chickens, turkeys, ducks and geese. Fish are caught by millions, and are allowed to "suffocate" in the air. Shell fish, which do not suffocate, are boiled alive.

Millions of animals are castrated every year to suit man's convenience or to improve the taste of his food. Three hundred thousand such operations are performed each year in California, and the total for the country numbers many millions. In addition, millions of cattle are dehorned. This prevents them from injuring each other in the herd, and from injuring human beings if they should become ferocious. These castrating and dehorning operations are often crude barnyard assaults done on resisting animals without anesthetics, but the operations are justified by necessity.

Man does not scruple to trap and shoot wild animals and to catch fish on hooks. He may do this for food, or for sport, or to obtain furs for clothing or feathers for adornment. He keeps animals in captivity that he may have them for his education or amusement, and cages birds that he may hear them sing. He harnesses draught animals that they may help him work. He cuts off lambs' tails to suit his convenience, and trims the tails and ears of dogs to suit his fancy.

The Domestic Animal Nuisance.

When cats and dogs become too prolific, they are destroyed merely to abate a nuisance. It is estimated that dogs double their number every year. This being true, it is clear that if allowed to multiply unchecked they would soon dispossess man of his habitations. New York City alone has killed more than a million superfluous cats and dogs in fourteen years. Even anti-vivisectionists recognize the necessity for destroying sur-



plus animals, and one of their journals, "Living Tissue," publishes an article entitled "Drown the Puppies." The article contains this solicitation: "Roll up the pups (or kittens) into an old rag alongside some weight, fasten the bundle securely and drop it into a bucket of lukewarm water, let stay one-half an hour—or, you may bring them to The Dog Shelter, and we will drown them for you."

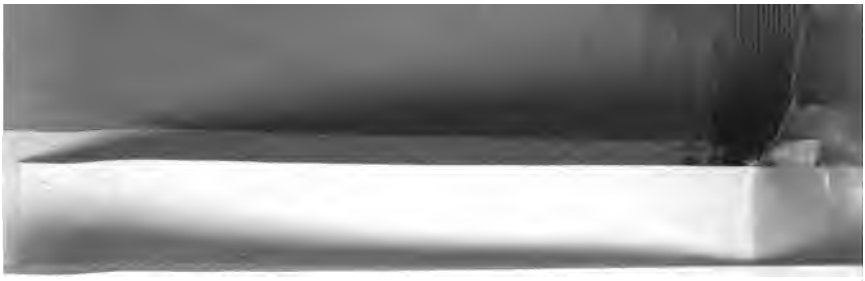
In dog shelters or pounds, animals are usually drowned or are suffocated to death with the fumes of charcoal. Afterward the bodies may be ground into fertilizer. These are matters of economic necessity, and it would be unjust to rebuke the anti-vivisectionists for it.

Laboratory Animals.

In practical life anti-vivisectionsist cannot avert the sacrifice of lower animals, much as they inveigh against it in their propaganda. Some of them have even been willing to have laboratory animals sacrificed for them when they were sick. For, after all, an anti-vivisectionist would not choose to die when a guinea pig could be made to die instead. And there would be no saving of lower life by such a sacrifice, for in digging the anti-vivisectionist's grave, scores of earthworms would be done to death.

In truth no intelligent man need scruple to have laboratory animals used for the benefit of his health, for such animals are not subjected to cruelty. Dr. Walter B. Cannon has pointed out that England has had legal inspection of laboratories for nearly half a century, and that no noteworthy abuse of animals has been recorded in this entire period.

The Washington (D. C.) Humane Society has shown no abuse of laboratory animals in the past fifty years, despite the fact that it is invested with extraordinary powers and is rewarded for its work by receiving all fines and forfeitures. Nevertheless, the insatiable anti-



vivisectionists introduced a bill in Washington two years ago to cripple animal research.

It is really self-evident that no gross abuse of laboratory animals could be perpetrated, for if the animals were customarily tortured and injured, the very purpose of the experiments would be defeated. Furthermore, physicians take no more pleasure in killing guinea pigs than anti-vivisectionists do in drowning puppies.

Human Volunteers.

The life of the physician is devoted to the relief of pain and sickness, and he does not hesitate to give his own life when this is necessary. It will be recalled that Dr. Lazear gave his life to determine the cause of yellow fever. Twenty volunteers faced insanity and death in experiments on pellagra; thirteen of these volunteers were physicians. Lay volunteers are equally ready to make the sacrifice for medical science, and it is noteworthy that one of the pellagra volunteers was a woman. During the war a number of soldiers offered themselves as subjects for experiments on trench fever, and more than a hundred naval men volunteered for experiments on influenza. It is thus that human beings meet situations of necessity; and since they are willing to sacrifice themselves, there is no reason why they should demur to use the lower animals for experiment when this too is necessary.

Frenzied Falsehoods.

The attempts of the anti-vivisectionists to show maltreatment of animals have been uniformly futile and ridiculous. In most of these attempts they have clumsily falsified scientists' reports of their own experiments. But occasionally they adduce more direct evidence in the form of affidavits from disgruntled or discharged laboratory attendants, or in the form of statements from persons who vouch for cruelties perpetrated. On investigation this evidence likewise resolves itself into simple mis-



statement. At the Senate committee hearing in 1919 a witness testified that he had heard the "most agonizing moans" nearly every night for four months from the George Washington Infirmary. Moreover, two people told him they had seen the mangled and half-decomposed body of a dog in an alley. For these reasons he thought that dogs were being tortured in the infirmary. The witness admitted that he had no actual knowledge of such torture or of any experiments; his conclusions were merely inference. This inference was shown to be wrong when the medical superintendent of the laboratories testified that no operations had been performed on dogs during the entire four months in which the witness heard the midnight moans.

Despite their ignominious failure to show that laboratory animals are maltreated, the anti-vivisectionists persist in their propaganda of falsehood. One of their expedients is to try to make it appear that there is a sentiment among physicians themselves against animal research. The New York Anti-Vivisection Society publishes a booklet of "Medical Opinions Against Vivisection." Mr. Harold Baynes has recently pointed out that many of the authorities cited in this pamphlet were born long before anesthetics were introduced, and that their opinions therefore have no application to present day methods. Among the authorities are Dr. John Elliotson, born 130 years ago; Dr. Charles Clay, born 120 years ago, and Sir Charles Bell, born 147 years ago. The society also publishes a pamphlet entitled "Vivisection From the Viewpoint of Some Great Minds." The pamphlet contains statements from 119 people, **eighty-seven of whom are dead,** and some of who have been **dead for more than 300 years.**

The iniquity of the anti-vivisectionists consists, not in quoting these men, but in quoting them as though they were living authorities familiar with the action of ether and chloroform. Sir Charles Bell (born 1774) is



cited in the Medical Opinions pamphlet as Professor of Surgery at the University of Edinburgh, Scotland. The same fraudulent anachronism was recently perpetrated on the United States Senate when the president of the Vivisection Investigation League quoted Sir Charles Bell and added that he "is acknowledged to be one of the greatest surgeons the world has ever produced."

Another device of the anti-vivisectionists is to misrepresent the opinions of such living authorities as Sir Frederick Treves and Dr. William Mayo. This they do by their well tried method of comma-clipping.

As a last resort, they are able to adduce a few medical opinions that can be cited without misrepresentation. The New York Anti-Vivisection Society's pamphlet, "Medical Opinions Against Vivisection," quotes the views of a number of alleged medical authorities. Two of these "authorities" happen to be from Denver, where I have been able to investigate them. One of them is an advertising physician. The other is a chiropractor, who has taken an eight-months course in chiropractic, but has been refused a license by the State of Colorado. In his sworn statement to the Board of Medical Examiners, he alleges that he was born in 1899, and that he was 26 years of age when he made the affidavit in 1914, which was fifteen years later. He states that he completed his course in May, 1915, which at that time was eight months in the future. Such gross discrepancies in a sworn statement would disqualify a man from expressing an authoritative opinion on anything, including anti-vivisection. Such then are the living medical authorities quoted in opposition to animal research.

A Dead Issue.

In reality the cause of anti-vivisection is dead, for the issue became defunct when ether and chloroform were introduced. The authority behind the cause is dead, and in part the cause is now supported by dead men's





money. The anti-vivisection societies tacitly admit that they are dead. One of them has four dead men and women for honorary vice presidents; another proclaims itself dead by its very name—The Noah's Ark Society.

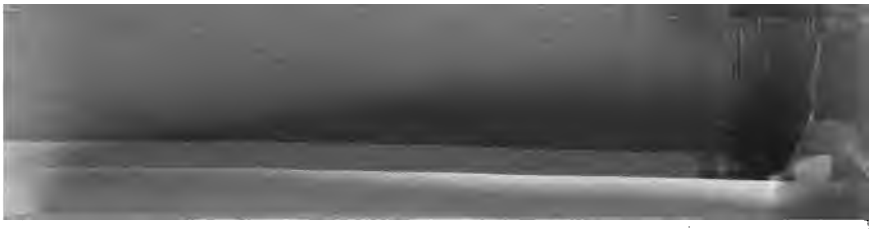
A Bogy.

The ghost of anti-vivisection is today merely a bogy used by the enemies of legitimate medicine, who seek to masquerade their cause. There is, however, no difficulty in identifying them. The New York Anti-Vivisection Society issues pamphlets entitled "What Would Have Happened Without Chiropractic?" "Complete Failure of Medicine in the World War," and "Shall We Let the Doctors Enslave Us?" Thus the society turns out to be a distributing bureau for anti-medical literature. In like manner we find the American Anti-Vivisection Society handling the publications of the National League for Medical Freedom, a league that is avowedly opposed to health bureaus and similar agencies that seek to prevent disease.

Deceiving the Public.

Of course these agitators can do nothing of themselves to check the progress of preventive medicine; they are therefore obliged to resort to subterfuge to enlist popular aid. As we have seen, they make their appeal to the highest human sentiments, but employ the lowest means of controversy—misrepresentation and falsehood.

Yet this appeal is not without results, for many honest and unsuspecting persons have been led to endorse the anti-vivisection movement. Professor W. S. Tyler, D.D., L.L.D., read the circulars of the New York Anti-Vivisection Society and reacted with the following letter, which in turn is used for further propaganda: "It would seem impossible for any human being, with one spark of humanity in his bosom, to perform such experiments in vivisection as you have published in your circular. Such experiments ought to be prohibited by law."



Here we see the intended psychological process in which a convert is made for "anti-vivisection" by a propaganda of untruths. When a few thousand people have been made to think in this manner, it is easy to crystallize their sentiment into legislation. Thus are sincere and good-hearted people enlisted in a supposedly humane cause, being unaware that they are merely creating a smoke screen behind which unscrupulous men attempt to destroy the fabric of preventive and experimental medicine and supplant it with the spurious remedies of the medical underworld.

Proposed Legislation.

Prohibitive legislation is, of course, the objective to which all anti-vivisection propaganda is directed. Bills have been introduced in legislatures, and measures have been initiated and referred to popular vote. Such bills have invariably been defeated, but the anti-vivisectionists continue their search for a weak spot in the community intelligence at which they may insert an entering wedge. One of their favorite expedients is to advocate bills exempting dogs from animal research. Obviously such measures are illogical, for any argument applying to dogs applies equally to other animals. Furthermore, it is presumptuous of the anti-vivisectionists to attempt to dictate what animals shall and shall not be used in research; for the scientist must use the animals that are best suited to the experiments. Chickens were used in experiments on beri-beri; guinea pigs and monkeys in meningitis, and mice and dogs in cancer. Goats were originally used in experiments on poison gas, but they proved to be immune and dogs had to be substituted.

The Thin Edge of the Wedge

Laws exempting dogs or any other animals from scientific research are unwarranted, for animals are afforded full protection from cruelty by the existing laws of all communities. In truth these exemption laws are





as disingenuous as all other forms of anti-vivisection propaganda; they are intended merely as entering wedges that may later be driven deep to cleave the fabric of scientific medicine.

In regard to the entering wedge, the Journal of Zoöphily says as follows: "We believe that in the course of time we shall have total abolition of vivisection, but as we cannot get it now, we think we may be justified in asking for something that will help the poor animals a little. Though we may not get abolition at once, we shall eventually."

Recently the anti-vivisectionists introduced a dog-exemption bill in Washington, D. C., and one of their principal witnesses stated in a Senate committee hearing, "We are so modest that we are beginning with the thin end of the wedge. We want to save dogs, and later on we will probably try to save other animals." The witness subsequently admitted that it was the hope of the anti-vivisectionists to prohibit experiments on every animal except man. The anti-vivisectionists of Colorado now seek to bring this hope to fulfillment by initiating a Death Bill that would make all form of animal experimentation illegal "with or without the use of anesthetics."

The Thick End of the Wedge.

Here we are evidently at the thick end of the wedge, and a little scrutiny will show that this end is broad enough to accommodate an insane asylum. In their ultimate program the anti-vivisectionists seek not only to abolish animal research, but also to establish vegetarianism and to control education. In addition they would destroy "the Red Cross Frankenstein" and all government bureaus that check disease. Lastly they would demolish scientific medicine, which they denounce as witchcraft; and in its stead would establish "medical liberty," a form of abandon in which quackery would debauch with death.



In the words of one of their international propagandists,* "We are going forward with the crazy cry of liberty upon our banner, and we never intend to rest until the battlefield is ours."

They seek not "liberty *or* death," but liberty *and* death; and it is their intent that we should die with them. Should ever their mad propaganda prevail, we shall die by swarms as in the plague of London. And while we wait for the bellman with the dead-cart, let us paint again the red cross of warning on our doors, **and write large that fearsome superscript, "Lord Have Mercy Upon Us."**

*Dr. Walter R. Hadwen.



APPENDIX A

THE COLORADO DEATH BILL

AN ACT CONCERNING EXPERIMENTAL OPERATIONS OR ADMINISTRATIONS UPON HUMAN BEINGS OR DUMB ANIMALS.

Be It Enacted by the People of the State of Colorado:

Section 1. It shall be unlawful to make any injurious or dangerous or painful experiment or experimental operation or administration or any dangerous or injurious or painful exhibitory or illustrative operation or administration upon or to any human being or any dumb animal either with or without the use of anaesthetics except for the purpose of relieving or curing such person or dumb animal: Provided, however, that a person over the age of sixteen years may consent to such experiment, operation or administration upon himself or herself and in the case of persons under the age of sixteen years the parents or those standing in the parental relation may consent thereto and in cases of such consent the provisions of this Act shall not apply. For the purposes of this Act the word injurious, dangerous and painful shall be held to include any experiment, operation or administration which may reasonably be expected to do injury to or endanger or cause pain or suffering to or in any part of any organ of the person or dumb animal so experimented or operated upon or administered to either at or during the time of such experiment, operation or administration or as an after effect or result thereof.

Section 2. Any person violating any of the provisions of this Act shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punished by a fine of not less than one hundred dollars nor more than one thousand dollars or by imprisonment in the county jail for not less than ten days nor more than six months or by both such fine and imprisonment in the discretion of the court. In case any defendant after conviction shall again violate any of the provisions of this Act for such second offense he shall upon conviction be punished by a fine of not less than two hundred and fifty dollars nor more than one thousand dollars or by imprisonment in the county jail for not less than ninety days nor more than one year, or by both such fine and imprisonment in the discretion of the court.

(The Secretary of State, Attorney General and Reporter of the Supreme Court do hereby designate and fix as the





ballot title and submission clause to the proposed initiated measure herein the following:)

An Act to Prohibit Injurious, Dangerous or Painful Experimental Operations or Administrations Upon Human Beings or Dumb Animals Except to Relieve or Cure Them; Making Exceptions of Persons Consenting to Such Experiments and Providing Penalties for Violations of the Act.	YES	
	NO	

APPENDIX B

The following rules are effective in all American Research Laboratories:

1. Vagrant dogs and cats brought to this laboratory and purchased here shall be held at least as long as at the city pound, and shall be returned to their owners if claimed and identified.

2. Animals in the laboratory shall receive every consideration for their bodily comfort; they shall be kindly treated, properly fed, and their surroundings kept in the best possible sanitary condition.

3. No operations on animals shall be made except with the sanction of the director of the laboratory, who holds himself responsible for the importance of the problems studied and for the propriety of the procedures used in the solution of these problems.

4. In any operation likely to cause greater discomfort than that attending anesthetization, the animal shall first be rendered incapable of perceiving pain and shall be maintained in that condition until the operation is ended.

Exceptions to this rule will be made by the director alone, and then only when anesthesia would defeat the object of the experiment. In such cases an anesthetic shall be used so far as possible and may be discontinued only so long as is absolutely essential for the necessary observations.

5. At the conclusion of the experiment the animal shall be killed painlessly. Exceptions to this rule will be made only when continuance of the animal's life is necessary to determine the result of the experiment. In that case, the same aseptic precautions shall be observed during the operation, and so far as possible the same care shall

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be taken to minimize discomforts during the convalescence as in a hospital for human beings.

(Signed) .....

Director of the Laboratory.

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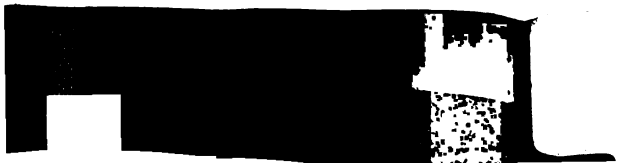
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